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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/571,507	03/10/2006	Daisuke Itoh	WAKAB97.001APC	4217

20995 7590 08/10/2009  
KNOBBE MARTENS OLSON & BEAR LLP  
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EXAMINER
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METZMAIER, DANIEL S

ART UNIT	PAPER NUMBER
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1796

NOTIFICATION DATE	DELIVERY MODE
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08/10/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jcartee@kmob.com  
eOAPilot@kmob.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/571,507	<b>Applicant(s)</b> ITOH ET AL.	
	<b>Examiner</b> Daniel S. Metzmaier	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 4/16/2009 & 3/10/2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 6-8, 11 and 12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 9, 10 and 13-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/10/2006</u> .   | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

Claims 1-18 are pending. Claims 13-18 were added in the preliminary amendment filed 10 March 2006.

### ***Election/Restrictions***

1. Applicant's election with traverse of the invention of Group I, claims 1-5, 9-10 and 13-18<sup>1</sup>, in the reply filed on 16 April 2009 is acknowledged. The traversal is on the ground(s) that the claims share the same special technical feature and cite the international written opinion in support thereof. This is not found persuasive because said Opinion is an opinion and is not legally binding in the prosecution of the US patent application.

Applicants further assert the claims are related and recite the substantially the same metal nanoparticle dispersion in a relationship of composition and a method of using said composition as having the same special technical feature. This has not been deemed persuasive since the expression "special technical features" shall mean those technical features that define a contribution which each of the claimed inventions, considered as a whole, makes over the prior art. The prior art cited and relied on below is evidence that the claimed inventions, considered as a whole, do not define a contribution over the prior art.

Claims 6-8 and 11-12 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention of Group II, there being

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<sup>1</sup> Claims 13-18, directed to a composition, have been grouped with Group I.

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no allowable generic or linking claims. Applicant timely traversed the restriction (election) requirement in the reply filed on 16 April 2009.

The requirement is still deemed proper and is therefore made FINAL.

***Priority***

2. Receipt is acknowledged of papers received in this national stage application from the International Bureau (PCT Rule 17.2(a)), submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Drawings***

3. The drawings were received on 10 March 2006 are acceptable.

***Specification***

4. The abstract of the disclosure is objected to because the abstract is too long. The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited.

Correction is required. See MPEP § 608.01(b).

5. The disclosure is objected to because of the following informalities: the reference to the Figure 1, Figure 1, or Figure 1 in the specification should correspond to the drawing labels as Fig. 1, Fig. 2, or Fig. 3, respectively. See pages 24 and 25 as an example.

Appropriate correction is required.

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6. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1-5, 9-10 and 13-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hutchinson, US PG PUB 2003/0077625. Hutchinson (abstract; paragraph (¶) [0014] et seq; ¶ [0018]; ¶ [0067]; examples and claims) disclose nanoparticle monodispersed, ligand-stabilized dispersions. The nanoparticles (¶ [0071]) are generally 1-2 nm and stabilized with thiol compounds (¶ [0082]). Hutchinson (¶

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[0108] et seq) discloses spin coating and evaporating the solvent in the formation of coated substrates.

Hutchinson differs from the claims in an explicit recitation of the fluid viscosities and concentrations of the ligand stabilizer.

Hutchinson (§ [0150]) discloses a gold to sulfur ratio of about 2.3:1.0. This equates to about 56 parts per 100 parts of gold. It would have been obvious to one having ordinary skill in the art to provide an effective amount for the function explicitly taught in the Hutchinson reference., *i.e.*, stabilize.

See also MPEP 2144.05(I) wherein it sets forth, “A *prima facie* case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. ***Titanium Metals Corp. of America v. Banner***, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985).”

Furthermore and while Hutchinson is silent regarding explicit fluid viscosities, Hutchinson (§ [0108] et seq; and examples) discloses deposition of the metal particles on substrates, the readily solvent solubility of said particles and the deposition of dilute solution. It would have been obvious to one of ordinary skill in the art at the time of applicants' invention to vary the concentrations of the particles based on the thickness of the coating; the coating components, *i.e.*, ligands and solvents, employed; and the application of said coated substrate.

It is further noted that the concentrated dispersion is deemed a future intended use and there is nothing of record to show the claimed compositions would be

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unobvious in view of the teachings of Hutchinson by mere variation of the solvent concentration for a desired end products clearly contemplated in the Hutchinson reference.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (571) 272-1089. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David W. Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**/Daniel S. Metzmaier/  
Primary Examiner, Art Unit 1796**

DSM